Farmer/Herder Survey

Sampling Strategy

Understanding the sequence of economic impacts following mine clearance activities is fundamental to developing an effective sampling strategy. The figure below shows the assumed sequence of economic impact in communities in Yemen after explosive ordnance has been removed from said communities.

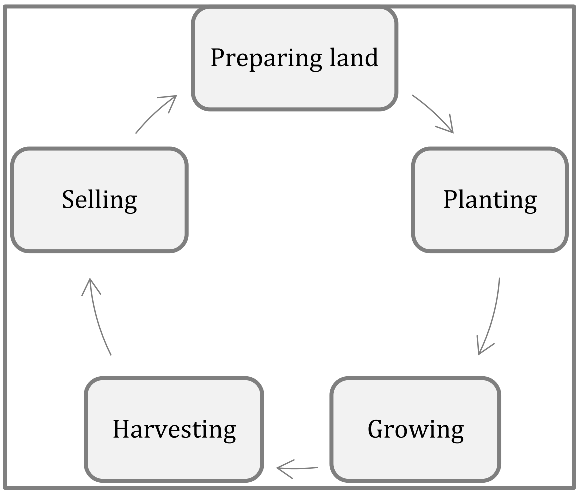
FARMERS Farmers are typically the first to benefit as cleared land becomes available for agricultural activities. The availability of more land can lead to increased agricultural production, resulting in higher incomes for farmers. As farmers' incomes rise, their spending power increases, which can stimulate local markets and businesses.	**BUSINESS OWNERS** With farmers earning more, local businesses (e.g., shops, markets) see increased demand for goods and services. As demand grows, businesses can expand, increasing their revenues and potentially hiring more staff.	**BROADER COMMUNITY** As local businesses grow, they create more employment opportunities, benefiting the broader community. Additionally, increased economic activity can lead to broader community development, including improved infrastructure and services.
HERDERS Herders are typically the first to benefit as cleared land becomes available for grazing activities. The availability of more and safer grazing land can lead to increased livestock production, resulting in higher incomes for herders. As herders' incomes rise, their spending power increases, which can stimulate local markets and businesses.	**BUSINESS OWNERS** With herders earning more, local businesses (e.g., shops, markets) see increased demand for goods and services. As demand grows, businesses can expand, increasing their revenues and potentially hiring more staff.	**BROADER COMMUNITY** As local businesses grow, they create more employment opportunities, benefiting the broader community. Additionally, increased economic activity can lead to broader community development, including improved infrastructure and services.

By focusing on farmers and herders, the methodology developed:

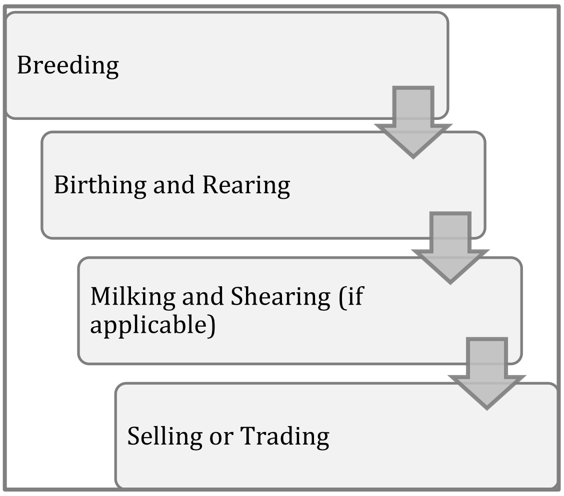
- Reduces **resources** needed for the assessments (both baseline and endline)
- Reduces the **overall timeline** for the implementation of the study by focusing on the group first impacted. If the baseline (and endline) surveys focus on the broader community, more time should be given to the economic impact of reaching the broader community population. This could involve waiting more than two years after the completion of mine clearance activities, which is not possible for most humanitarian mine action actors due to how funding for mine action works.

- Allows the economic impact of clearance activities to be determined after **only one complete farming/herding season** since the area has been cleared. However, data collection for the baseline and endline **should occur in the same month**. Since farmers/herders often have irregular income based on the farming/herding cycle phase, completing both the baseline and endline during the same month provides the best opportunity to compare income and other economic indicators.

Farming Cycle



Herding Cycle



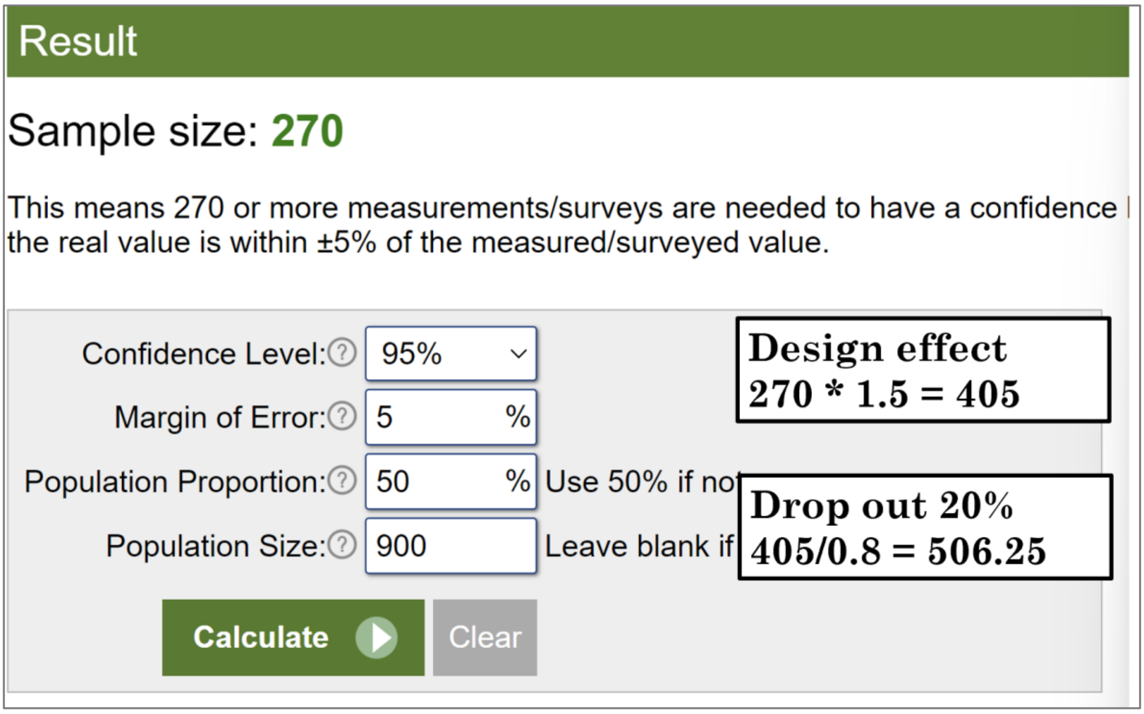
Concerning the size of the sample, for the **baseline assessment**, the following steps should be taken:

1: Determine the population size in the intervention and control community. The population is the total number of farmers and herder households in that community. If the exact population is unknown, make an educated estimate, preferably being on the high side to ensure sufficient representation.

2: Use an online calculator (i.e. https://www.calculator.net/sample-size-calculator.html) to determine the sample size needed. Input the population (i.e., the number of farmer and herder households in the community), the confidence level, and the margin of error. Using a confidence level of 95% and a margin of error of 5% is advisable. However, you may want to change these parameters if resources are limited.

3: Adjust the given sample size for the design effect and drop-out. For the design effect, you multiply the given sample size by 1.5. For drop-out, you need to estimate the proportion of respondents who will drop out between the baseline and the endline and add that to the sample size.

The picture on the next page gives an example of how to calculate the sample size using the online calculator. In this example, the sample size to be achieved is 507



Respondent Tracking

The **endline** assessment should target the same individuals surveyed during the baseline assessment (in both intervention and control communities). This allows for a **direct comparison** between baseline and endline data to assess changes over time. Moreover, this improves the **statistical power** of the sample by reducing variability within the data, as it controls for individual differences between participants.

Before implementing the baseline assessment, a plan should already be in place for tracking and locating respondents during the study. This plan should include different strategies and mechanisms to increase the response rate during the second survey. Some possible strategies and mechanisms to consider include:

- Keep detailed records of participants' contact information, including multiple ways to reach them (phone numbers, home addresses, email).
- Check in with participants periodically to confirm their details and update contact information where needed.
- Work with community leaders who can help locate respondents and encourage them to stay engaged in the study.
- Hold community meetings to explain the importance of the study and the need for ongoing participation.
- Communicate the importance of the study and how participants' involvement contributes to its success.
- Set clear expectations with respondents about the time commitment required and what the follow-up survey will entail.
- Offer flexible scheduling options for the follow-up survey to accommodate participants' availability.

- Provide respondents with multiple methods for completing the second survey, such as in-person, by phone, or online.
- Reinforce informed consent at each stage, ensuring participants understand their rights and the study's purpose.
- Continuously assure participants that their responses are confidential and will be used solely for the study's purposes.
- Implement a tracking system to monitor response rates and follow up promptly with participants who have not responded.
- Regularly analyze response rates and adjust strategies as needed to improve participation.